Pacterm
Kanterm
Superfax

PC-Combo Manual

Kantronics

RF Data Communications Specialists

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PC-Combo Installation

On your distribution disk you will find one file named PC_COMBO.EXE. All files have been combined and compressed into a single file, called a self-extracting file. This file is an executable file, and when run re-creates the individual files that were collected into it, without destroying itself. This is done by typing PC_COMBO at the DOS prompt. Extracted files should be placed on a different disk by typing a space after PC_COMBO and then the disk drive designator. If desired, a path may also be used. To extract only certain files, type a space after the disk drive designator, then type the filenames desired, separated by spaces.

We suggest that you make a back-up copy of your distribution disk.

If you have a hard disk

To extract all files from the distribution disk to the current directory on your hard disk, insert the distribution disk in drive A, and at the DOS prompt type:

```
a:pc_combo c:
```

(a path name may be used if desired)

You may want to put each program in a different DOS directory.

To extract only those files for Kanterm follow the above command with a space and the file names listed for Kanterm (separated by a space):

```
a:pc_combo c: kanterm.exe *.txt
```

To extract Pacterm only, at the DOS prompt type:

```
a:pc_combo c: *.com *.asm
```

To extract Superfax only, at the DOS prompt type:

```
a:pc_combo c: s*.* declare
```

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If you have two floppy drives

On a floppy drive system, you will probably want to put each program on a separate disk.

Place the distribution disk in drive A and a blank, formatted floppy disk in drive B.

To extract Kanterm only, at the DOS prompt type:

```
a:pc_combo b: kanterm.exe *.txt
```

To extract Pacterm only, at the DOS prompt type:

```
a:pc_combo b: *.com *.asm
```

To extract Superfax only, at the DOS prompt type:

```
a:pc_combo b: s*.* declare
```

If you have only one floppy drive

Follow the instructions given for having two floppy drives. The system will ask you to swap disks. You may be required to swap disks several times in the process of creating your working disk.

Pacterm

Files for the Pacterm program:

PACTERM.COM	Program file
PACTERM.ASM	Assembly language file for above
LOAD.COM	Translates hex files to program files
LOAD.ASM	Assembly language file for above
UNLOAD.COM	Translates program files to hex files
UNLOAD.ASM	Assembly language file for above

Pacterm is a simple terminal program with on-line help. It has split screens for transmit and receive data. It also allows you to send and receive files. If you are not familiar with computer communications, you may want to start with this program

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Kanterm

Files for the Kanterm program:

FUNCTION.TXT	Stores function keys
KANTERM.EXE	Program file
MANUAL.TXT	Documentation

Kanterm gives you the option to split the screen three ways: separate receive window for each port on the KAM and KPC-4 and a transmit window. Other features include: user loaded buffers, scroll back buffer, date and time functions, and send/receive files.

Superfax

Files for the Superfax program:

SUPER130.DOC	Documentation
SUPERFAX.EXE	Program file
SUPER130.BAS	Source file for above
DECLARE	Source file declarations
SFVIEW.EXE	Sample viewing program for SuperFax II
SF20.CFG	Configuration file for sfview
SATDEMO.SF	Picture file (view with sfview)

Superfax allows you to receive weather facsimile pictures. If you find you enjoy this you may want to purchase SuperFax II, which adds more capabilities.

Cable Instructions

Kanterm and Pacterm

Kanterm and Pacterm both require a 5-wire cable between the computer and the TNC. The following pins must be wired.

TXD Transmit Data

RXD Receive Data

SG Signal Ground

RTS Request To Send

CTS Clear To Send

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Pin Name	TNC (DCE) DB-25 Pin No.	DB-9 Pin No.	RS-232 Computer (DTE) DB-25	DB-9
TXD	2	3	2	3
RXD	3	2	3	2
SG	7/1	5	7/1	5
RTS	4	7	4	7
CTS	5	8	5	8

Superfax

To receive WEFAX you need to connect an audio cable from your HF receiver to the audio input of your TNC. The KPC-4 uses Port 2 and the KAM uses the VHF port for receiving WEFAX. You should connect an audio cable from the audio output jack of your HF receiver to the correct audio input pin of the KPC-4/KAM to receive the WEFAX signal. With the KAM you can connect the audio from your HF receiver to the VHF and HF ports at the same time and use the bargraph tuning indicator to tune your WEFAX station.

You can use the same computer-to-TNC cable as for Pacterm and Kanterm. TXD, RXD and SG pins must be wired.

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Pacterm

To Start Pacterm

It is best to leave your TNC off until you have Pacterm setup and in the terminal mode. Having the TNC on early will cause data to be backed up between the computer and TNC. Then when Pacterm is put in the terminal mode, what is in the TNC will dump rapidly to the screen.

Have your computer logged onto the drive and directory where you have stored the Pacterm files and type PACTERM at the DOS prompt. When Pacterm starts, its help menu is displayed on the screen. This menu can be accessed at anytime by pressing the F1 key.

Setup

It is important that you first set the communication port and baud rate. Pacterm must know what port to use to talk to the TNC, and how fast to talk.

F7 increment communication port number

Pressing F7 causes Pacterm to toggle between the communication ports: com1 and com2. The port that is in use is shown near the bottom of the screen. COM1 is default and must be reset, if necessary, each time you begin the program.

F8 increment baud rate

Pressing F8 will cause Pacterm to step through the available baud rates. The default is 1200 baud and must be reset, if necessary, each time you begin the program. Available rates are: 300, 600, 1200, 2400, 4800, and 9600.

This rate corresponds to the ABAUD command in the TNC. Until the ABAUD rate is set and PERMed, the TNC will run an autobaud routine to determine how fast the computer is talking. (The battery backup option, for the TNC, will also store the ABAUD rate, after the ABAUD command is set.)

F3 toggle KPC / UTU-XT selection

Pressing F3 toggles between the KPC (packet) Help Menu and the UTU-XT (other modes) Help Menu. The UTU-XT selection

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adds four more commands for the additional operating modes of the UTU-XT and the KAM. The term TNC is used in this manual to refer to all units. Some TNC commands referred to may not be present in the UTU-XT.

F3, F7, and F8 work only while the Help Menu is on the screen. Other commands work only while in the Terminal Mode.

Exiting Pacterm

Pressing F10 will exit to DOS from any screen. The TNC power must remain on when exiting this way because commands are being sent to the TNC. (KPC menu – Ctrl-C Ctrl-C Ctrl-C d; UTU-XT menu – Ctrl-C X.)

The Escape key or a Ctrl-C will also exit to DOS from the Help Menu.

Terminal Mode

PRESS BACKSPACE TO CONTINUE.

Pressing the backspace key will put Pacterm in the terminal mode. This is the mode used to talk to the TNC. The top part of the screen will display data received from the TNC. Data typed on the keyboard will display between the two lines. The bottom line is the status bar.

If you are just starting, now is the time to turn on the TNC. At anytime the F1 key can be pressed to display the help menu. The backspace key will return you to terminal mode.

Autobaud Routine

If the ABAUD command in the TNC has not been set, the TNC will run an autobaud routine to determine the baud rate of the computer. The TNC will send the same message over and over again at different baud rates. This will look like a lot of garbage until the baud rate of the TNC matches the baud rate set in Pacterm. Then the screen will display:

PRESS (*) TO SET BAUD RATE

At this time you should press the asterisk, *. Then the TNC will send its sign-on message, ask you for your callsign, and then the cmd: prompt will appear. See your TNC Operations

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Manual for more information. The UTU-XT will not ask you for your callsign.

TNC parameters

The following parameters need to be set for Pacterm to work properly. To set them, type as shown, with each line ending with the return key. (Do not type what is in parentheses.) See your TNC manual for a description of the commands.

8 bitconv on	NO SPACE
command $03	(Control-C)
echo off	
filter off	
flow off	
parity 4	(none)
xflow off	(hardware flow control)
xmitecho on	(KAM or UTU-XT)

F5 toggle type ahead / transmit mode

Pressing F5 causes Pacterm to toggle between an immediate transmit mode (to TNC), or a type ahead buffer. You will see either ONLIN or OFLIN in the status bar.

When ONLIN appears, everything you type will go immediately to the TNC.

When OFLIN appears you are in the type ahead mode – what you type will be stored in the computer's memory; it will be sent to the TNC when you press another F5, and Pacterm will return to ONLIN at this time. F5 does not add a carriage return to the data. In packet you must remember to end what you have to say with the return key, or the TNC will not transmit it.

Alt-R can also be used to go OFLIN to the type ahead buffer. And Alt-T can be used to go ONLIN. Alt-T sends a return at the end of the data. Alt-R and Alt-T function differently when F3 has been used to choose the UTU-XT selection (covered later).

The type ahead buffer can hold up to 1,000 characters.

F9 exit to cmd: mode

Pressing F9 will return the TNC to command mode. When using the KPC menu this will send three Ctrl-Cs to the TNC.

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When using the UTU-XT menu Ctrl-C X is sent to the TNC. The screen will be cleared (except for the two lines and status bar), and the cmd: prompt will appear (unless you were already in command mode). The status bar is reset to its default and many software variables are reset.

The COMMAND parameter in the TNC must be set to $03 for this to work. You may also enter command mode by issuing a Ctrl-C or Ctrl-C X, as appropriate. This will not clear the screen or reset anything.

Flow Control

Pacterm uses hardware flow control. RTS and CTS status are shown on the right side of the status bar. RTS indicates the TNC is allowed to talk to the computer. CTS indicates the computer is allowed to talk to the TNC.

F6 toggle RTS

Pressing F6 will toggle Request To Send (RTS). By default, XON and RTS show in the status bar. This indicates that data is allowed to flow from the TNC to the computer. Pressing F6 will turn RTS off and XON will change to XOFF. This will stop the flow of data from the TNC to the computer. Pressing F6 again, will restart the flow of data from the TNC.

Saving Data to Disk

Alt-B buffer control

The Alt-B command toggles the buffer on and off. When the buffer is on, data that appears in the receive section (top) of the screen will be saved in your computer's memory. BUFF appears in the status bar when the buffer is on. Using F9 will also turn the buffer off. When using the UTU-XT menu, changing speeds in RTTY, ASCII, or CW mode will also turn the buffer off.

The size of the buffer depends on the amount of memory in your computer.

Alt-C clear holding buffer

Pressing Alt-C will erase all information stored in the buffer.

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F2 save holding buffer to file

Pressing F2 brings up a request to enter file name. After entering the file name, press return. The file will be saved and Pacterm will return to terminal mode. Pacterm supports drive designators when saving files, but does not support directories.

If the information is stored with a normal file name, carriage return/line feeds will be added as needed. To save data exactly as received use a .bin suffix following the file name (binary file).

Sending a File from Disk

Alt-F file transmit

Pressing Alt-F will display a · ($FA) on the screen. Then type the file name followed by another Alt-F. The file name must be exact. Do not add spaces between the Alt-Fs and the file name. Pacterm supports drive designators as part of the file name, but does not support directories.

If you are in a non-packet mode, using the UTU-XT menu, you must also do an Alt-T to tell the UTU-XT or KAM to actually transmit the file.

Sending/Receiving Program Files

Before a program can be transmitted it must be changed from a binary file to a text file. This process is done with the Unload program.

The Unload program actually converts the program to be sent to a hex file that can be transmitted. After the program is received it will need to be converted back to binary code. This is done with the Load program. At the DOS prompt, enter the command UNLOAD followed by the file name of the program to be converted. The Unload program will convert the program to hex code. The Unload program requires that the program begin at 100 hex. Once the conversion is complete a new file will exist in the directory. It will be listed as the file name with a .HEX extension. This file can be transmitted using the Alt-F command.

If you receive a program sent in hex code and want to convert it to binary use the LOAD program. Follow the same procedures

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as the Unload program. The LOAD program creates a binary file with a .COM extension.

Printer

The Alt-P command toggles the printer on and off. When the printer is on, data that appears in the receive section (top) of the screen will also be sent to your printer. PRINT appears in the status bar when the printer is on. Using F9 will also turn the printer off.

Extra Functions added with the UTU-XT menu

The UTU-XT menu will also work with the non-packet modes of the KAM. The term TNC will be used to refer to both these units.

Alt-T transmit – exit type ahead

Alt-T sends a Ctrl-C T Ctrl-M to the TNC. This causes the TNC to key the radio and transmit the data in the TNC's buffer. In the status bar RECV changes to XMIT. If F5 had been used to put Pacterm in the type ahead mode (OFLIN), it will change to ONLIN.

Alt-R receive – return to type ahead

Alt-R sends a Ctrl-C R to the TNC. This will immediately return the TNC to the receive mode, even if there is still data in its buffer.

Alt-E return to receive

Alt-E sends a $1D to the TNC and the graphics character <-> to the screen. When the TNC echoes this character to Pacterm, Pacterm will send the TNC a Ctrl-C R and return to receive. This would be used instead of Alt-R to allow Pacterm to determine when the buffer is empty, and then return to receive.

Note that the transmit echo (XMITECHO) command should be turned on and the ECHO command should be turned off so that the return to receive character can be recognized at the end of an over the air transmission instead of as an echo of the RS-232 data transmitted. The FILTER command should be OFF to allow $1D to be monitored.

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Alt-H shift tone pair frequencies

Alt-H sends a Ctrl-C S to the TNC. This command changes shifts in RTTY, ASCII, and AMTOR.

Alt-I invert received signal (rtty/ascii)

Alt-I sends a Ctrl-C I to the TNC. This command inverts the received signal in RTTY and ASCII modes.

Alt-Sn speed change

Alt-Sn sends a Ctrl-Cn to the TNC where n is a number between 0 and 9. This command lets you change the speed at which you will transmit in CW, RTTY and ASCII. In CW Alt-Sn will increment transmit speed by 5*n. In RTTY and ASCII the TNC will cycle through its programmed speeds.

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Kanterm

To Start Kanterm

Have your computer logged onto the drive and directory where you have stored the Kanterm files and type KANTERM at the DOS prompt. This will bring Kanterm up at 9600 baud on COM1. If you wish to use another speed or port, add the following options:

KANTERM *baudrate comport*

baudrate options: 300, 600, 1200, 2400, 4800, 9600

comport options: COM1, COM2

If the *comport* option is used then the *baudrate* option must also be used.

Communications will not be possible if the baud rate in the TNC is different from the baud rate in Kanterm. The status line at the top of the screen shows the baudrate and comport. If you have trouble with the TNC autobaud routine, use Pacterm to set and perm the ABAUD command. Comport tells Kanterm where the TNC is connected.

Kanterm has not been tested with any multi-tasking program so its operation in a multi-tasking environment is not guaranteed.

Setup

Once you have received the TNC sign-on message and cmd: prompt, it is important that you first use Kanterm's Set Parameters command. This will send commands to the TNC for proper operation of Kanterm. To do this, press the F9 key to bring up the menu. Use the cursor keys to move the highlight bar to Set Parameters. Press return.

Some commands will be sent. Then you will be asked to enter your HF/1 stream switch character. This is the character you will use to command the TNC to talk on an HF (KAM), or Port 1 (KPC-4) stream. Use a character that will not be part of a normal conversation. Then you will be asked to enter your VHF/2 stream switch character – VHF (KAM), Port 2 (KPC-4).

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If you are using a TNC with only 1 port, enter the same stream switch character at both prompts.

These characters will be used by you to change streams, and by Kanterm to determine which window to use to display incoming data. You will be asked if you want to display or hide the streamsw characters. Normally you will want to hide them. Enter h for hide or d for display.

The following commands are sent with the set parameters command:

parity 4
echo off
flow off
delete $08
ring on
filter off
lcok on
escape off
bkondel on
streamev on
8bitconv on
pactime after 30
streamca off
streamdb off
xon $00
start $00
xoff $00
stop $00
txflow off
trflow off
xflow off
streamsw $5C/$7C (depends on your selection of stream switch characters)

Set Parameters should be executed each time you start Kanterm to insure everything is set properly.

Exiting Kanterm

Pressing ESC, when not in a menu operation, will exit Kanterm. You will be asked if you wish to exit to DOS. You must answer n if you wish to remain in Kanterm.

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Screen Configuration

Pressing F10 will cause the screen to change to the next screen configuration. When Kanterm begins it is in the Combined Ports configuration. This should be used for all single port TNCs. Pressing F10 will cycle through the following configurations:

Combined Ports: all incoming data on a full screen display, both ports interleaved

Horizontal Split: each port has a separate 80 column window

Vertical Split: each port has a separate 40 column window

VHF/Port 2: full screen for this port only, other port not displayed

HF/Port 1: full screen for this port only, other port not displayed

All configurations have the Transmit Window across the bottom of the screen.

Flow Control

Kanterm uses hardware flow control. Request To Send (RTS) status is shown in the status line at the top of the screen. RTS indicates that the TNC is allowed to talk to the computer.

Ctrl-S

Pressing Ctrl-S turns RTS off. This will stop the flow of data from the TNC to the computer.

Ctrl-Q

Pressing Ctrl-Q turns RTS on. This will start the flow of data from the TNC to the computer.

Date and Time

Pressing **F8** causes the date, time and version number to be sent to the TNC in the following format.

Kanterm-PC v2.11
Tue Sep 19 10:37:07 1989

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Pressing **Ctrl-D** will cause the date and time to be sent to the TNC in the following format. If the TNC is in command mode this will set the TNC clock. See your TNC manual for a description of the DAYTIME command.

da 890919103715

Day and time are also shown in the status line at the top of the Kanterm screen. All forms of date and time are read from the DOS clock.

Clear Screen

Pressing the HOME key will cause the screen to be cleared of transmit/receive information. This does not clear the scroll back buffer.

Scroll Back Buffer

Pressing any cursor control key, except HOME, will activate the scroll back buffer. This allows you to use the cursor control keys to look back at the last 256 lines of received text. Information will be displayed as it was received – as though you were using the combined ports screen configuration. To exit press the ESC key. Word wrapping is not done in the scroll back window.

Menu

Pressing F9 causes the menu to appear on the screen. The highlight area is moved with the cursor keys to the desired selection. Then press the return key to select that item. Following is a description of these functions, except Set parameters which was explained earlier under Setup.

EXIT

This is the way out when you do not wish to make a selection.

Function bars

Selecting this item causes the function bar screen to appear. There are 37 buffers that may changed to contain anything you desire. Possibilities are personal information, contest replys, or TNC command strings.

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The 37 Keys are:

F1 thru F7
ALT F1 thru F10
SHIFT F1 thru F10
CTRL F1 thru F10

Note that F8, F9, and F10 are preset functions and may not be changed.

Precoded function bars are: F1 CTRL-C (^C), F3 CONVERS, F5 MHEARD, F7 MHCLEAR. These precoded bars may be changed by the user.

To change a function bar's contents move the highlight over the function bar you wish to change. Press return. If you do not wish to change anything highlight EXIT and press return.

After selecting the function bar to change, a screen will appear showing its present contents. To change the contents, type in the new contents. Control characters are displayed as two-character combinations. Example: Ctrl-M is ^M. A descending counter, showing how many more characters may be entered, is displayed in the transmit window.

When you are finished with this bar press the ESC key. The new contents will be saved to disk and you will be allowed to change another bar. When you are done highlight and select EXIT to return to normal operations.

CAUTION

Do not fill each and every buffer to its capacity ie: 37 buffers of 256 characters each. This causes memory allocation errors and will cause a DOS system crash!

Sending messages stored in function keys

When not in a menu, send a prestored message by pressing the function key under which it is stored.

Manual

Selecting this menu item causes the manual to be displayed on the screen. You may use the cursor keys to scroll through the manual. When you have finished, press the ESC key to return to normal operations.

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Printer open^close

This menu selection is an on/off toggle. Selecting it either turns the printer on or off, depending on its current condition. Information will be printed in the order it was received – as though you were using the combined ports screen mode.

Buffer open^close

This menu selection is an on/off toggle. Selecting it either opens or closes the capture buffer, depending on its current condition. When opening the capture buffer, the request "enter file name" appears in the transmit window. Type in a file name and press return. The word BUFFER will appear in the status line at the top of the screen. To close the buffer, select this menu item again, or use a Ctrl-B.

Note that this is not an appending type buffer. It always opens empty. Information will be saved in the order it was received – as though you were using the combined ports screen mode.

Ctrl-B

Pressing Ctrl-B also toggles the capture buffer open or closed. When opening the buffer with Ctrl-B you will not be asked to name the file, instead it will be named capture.txt for you. If capture.txt already exists on the disk, it will be renamed to capture.bak. If capture.bak already exists, it will be replaced.

Word^Char toggle

This toggle controls how received characters will be displayed. The normal, fastest, most efficient way is the word mode. In the word mode nothing is displayed on the screen until a full word has been received. In the character mode each character is displayed as it is received.

The character mode should only be used when NOT in packet operation. If character mode is used for packet, the information will not be displayed in its proper screen (ie: VHF may appear in the HF screen). Word-wrapping is disabled in character mode.

Character mode is intended to enhance CW/RTTY operations. When character mode is on, CHAR appears in the top status line.

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Send Binary – PKT

This selection allows you to send a .EXE or .COM file to another Kanterm user, including users of KANTERM-64 and KANTERM-128. The protocol used takes advantage of the packet protocol in use today and is not compatible with XMODEM or any other named protocol. This protocol is simple, effective, and proprietary.

After selecting this item, you will be asked for the name of the file to send. Enter the name followed by a return. The progress of the transfer will be displayed in the transmit window.

The receiver of this file must be ready to receive before you activate this binary send routine or it will fail!

Receive Binary – PKT

This selection is the compliment of send binary. After selection you will be asked for a name to use for the file. Input a name with the proper extension and press the return key. Progress of the file transfer will be displayed in the transmit window.

Send text file

This menu selection sends ordinary text files from disk. These files may be prepared with a word processor or may be text files from any other source. Information which is too large to fit into one of the 37 buffers could be put into a text file and sent using this function.

You will be asked if you are in packet mode. Answer 'N' if your are in RTTY, ASCII, AMTOR, or CW.

You will be asked for the file name. Enter it (don't forget the extension) and press return. Progress will be displayed in the transmit window.

Modify screen size

This menu selection allows you to change the size of the dual split screens. Use the cursor arrow keys to change the screen sizes. Left/Right control the vertical split screen and Up/Down control the horizontal split screen.

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Delete^Add borders

This menu selection is a toggle which controls whether the borders will be displayed or hidden on the receive windows. Its setting does not affect the splitting of the screen.

Screen colors

This menu selection allows you to change the screen colors. Your selection is saved and restored when you next use Kanterm. Use the enter key to step through the possibilities which are described in the transmit window. Press ESC to save colors and return to normal operations.

Print screen

This menu selection causes the contents of the receive window(s) to be printed on the printer (LPT1:). If using split windows the HF/Port 1 window will be printed first, followed by the VHF/Port 2 window.

Save screen

This menu selection causes the contents of the receive window(s) to be saved to a disk file. If using split windows the HF/Port 1 window will be saved first, followed by the VHF/Port 2 window. This file is an appending type file. If you desire, you may stack up screen data in one disk file.

Disk directory

This menu selection allows you to display the contents of any directory on any available disk drive.

The input to this menu option is:
[d:][path][filename[.ext]] [/W][/P] <RETURN>

[options]

[d:] The disk drive letter followed by a colon.
[path] The directory path to use
[filename] The filename you want. * and ? are acceptable.
[.ext] The extension to the filename. * and ? are acceptable.
[/W] Produce a multi-column listing.
[/P] Pause after each screen full.

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Example: a:\lc\s*.txt /W This will list all files matching *.txt from the \lc\s\ directory on drive a: in a multi-column format.

Send DOS command

This menu selection allows you to send a command to DOS.

If the Disk directory or Send DOS commands don't work, the files and buffers statements in the config.sys file may need to be changed. Try setting files=20, and buffers=20. See your DOS manual for more information.

Communication Error Codes

0 No Error
-1 General Error
-5 No Memory Available for Buffers
-8 Buffer is Empty
-9 Buffer is Full
-11 Clear to Send Not Present
-14 No 8250 UART Installed at I/O Address

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Superfax

To Start Superfax

Have your computer logged onto the drive and directory where you have the Superfax files and type SUPERFAX at the DOS prompt.

If you have been running an earlier version you must delete your configuration file (SUPERFAX.CFG) and reconfigure.

Setup

The first time you have run Superfax you will be prompted to answer a few questions. (1) Superfax needs to know which serial port the TNC is connected to, and (2) what baud rate to talk to the TNC. (3) The number of lines to use for the buffer may depend on how much memory is in your computer.

(4) During the Receive/Display Live mode Superfax will automatically save files if you use the F5 option. Superfax needs to know where you want these saved. (5,6) Superfax can send commands to the TNC before and after it tells the TNC to enter wefax mode. When using the KAM and KPC-4 you need to enter MAXUSERS 0/1 before entering wefax mode. With single port TNCs you need to enter MAXUSERS 1. (7) The files saved with F5 will be numbered beginning with your requested number.

(8) Superfax needs to know what printer you use. If your printer is not listed (which is likely) select the "None of the above" selection. Be sure to have your printer manual handy as you will need to look up the ASCII codes that control its graphics modes. When prompted, enter the codes to put it in the various modes by entering decimal numbers as necessary. The configuration file will be created at the end of the program run.

Next you will see the main menu. Simply press the Function key for the desired function.

Exiting Superfax

F10 is the universal exit key.

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F1 Enter Terminal Mode

Pressing F1 will bring up a simple split screen terminal mode, that allows you to talk to the TNC. What you type is buffered in the computer and goes to the TNC when you press return.

F2 Receive / Display Live

When you select this from the main menu your TNC will automatically be placed into the wefax mode. It will be returned to the command mode when you exit with the F10 key. The date and time will also be reset from your computer system clock, since timekeeping is suspended while receiving wefax. Most options are toggled in wefax receive mode. This means that you press the key once to turn it on, and again to turn it off. There is a status line at the bottom of the screen.

F1 toggles the **capture buffer** on and off. While capturing, the percent of the buffer remaining is displayed in the status line. When it reaches 100% the buffer will be closed.

F2 is the **suspend** mode. It will cause updating of the buffer to stop and data will be ignored until it is pressed again. Toggling this feature will NOT result in loss of picture synchronization.

F3 and F4 allow for **horizontal adjustment** of picture synchronization in large and small steps respectively. Press these keys repeatedly until the edge of the picture is in the correct place. Usually enough sync lines are sent at the beginning of transmission to allow you to adjust it before actual picture data is sent. The F3 key adjusts about 1-1/2 inches to the left, while the F4 key adjusts about 1/8 inch to the left.

When you press **F5** the data being received will be **captured to disk**. Since you usually use this option while receiving a live picture you have little time for entering a filename. Superfax solves this problem by automatically generating a filename to use for saving. The filename is "SF" plus a number. Each time you toggle the save to disk feature off then on again, the number is incremented. The current number is retained from run to run. To restart at zero, rerun the configuration routine and answer the question accordingly.

The default save drive is set when you answer the configuration questions. If you are using a PCjr you must arrange for F5 saves to go to a ramdisk, otherwise data will be lost.

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If you cannot use a ramdisk then capture your pictures to the memory buffer and use the save buffer command from the main menu. That command allows you to specify the filename and path and does not require DMA to operate.

Pressing **F6** toggles the **resolution** of the received picture. The status line will show hi/LO for low resolution and HI/lo for high resolution. The default is LO resolution which discards 2 out of every 3 received lines for both screen display and saving to buffer or disk. This mode uses the least memory and displays the picture for best viewing on the screen. When printed, some loss of detail will occur but in most cases is not objectionable. This mode will also print somewhat faster. The HI resolution mode displays and saves every line sent by the transmitting station. It will display very elongated on the screen as it is received but will print a more detailed picture on your printer, and takes slightly longer to print.

The printer mode is switched between single and double density mode when you tell the program that your data is for a LO or HI resolution picture, respectively.

F3 Display From Buffer

Pressing F3 displays to screen what is in the buffer. See F1 under Receive/Display Live for how to open and close the buffer.

F4 Save Buffer

Pressing F4 first asks for a filename, then saves the buffer to disk.

F5 Print Buffer

Pressing F5 first asks you if your picture is in HI or LO resolution. Then sends the buffer to the printer

F6 Display Disk File

Pressing F6 first asks for a filespecs mask for the directory listing. For example. SF* would request a directory listing of all files saved automatically by Superfax (Receive/Display Live F5). Then you are asked for which file you would like to display.

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F7 Print Disk File

Pressing F7 asks for the filespecs mask for the directory, and the filename (as in F6). Then asks you if your picture is in HI or LO resolution. The file is then sent to the printer.

F8 Change Configuration

Pressing F8 asks you the same configuration questions discussed under Setup.

SFView program

This program allows you to view charts received by SuperFax II. The file SATDEMO.SF has be provided as an example. To start the program type SFVIEW at the DOS prompt. SFView will detect which video adapter card is in your computer and display the picture using the highest resolution possible. "Select a search path/file" will display a directory of the requested files. Use the cursor keys to move the highlight to the file you wish to display and press return. After the picture has been displayed press any key to exit.

Programmers note

The source code included will compile with the Microsoft QuickBasic compiler version 4.0 or later. Feel free to experiment with it for your own use, but you may not distribute original or modified versions of the program in any form.

Finding Wefax Broadcasts

You will nearly always find broadcasts from the following stations, if ionospheric conditions permit:

Halifax, CA 4.275, 9.890, 13.510
San Francisco, CA 4.346, 8.682, 12.730, 17.151
Washington, D.C. 4.795, 10.185, 12.205, 14.672
Hawaii 4.802, 7.770, 9.440, 11.090, 13.628, 13.863
Norfolk, VA 8.080, 10.865, 16.410
Alaska 8.460
Boston, MA 8.505, 12.750
San Diego, CA 8.646, 17.410
Mobile AL 9.158, 17.448
Brentwood, NY 9.390, 11.035

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Return/Repair Procedures

Consult the limited warranty policy in this manual for the service provisions offered by Kantronics at no charge. This warranty is considered to be in force only when the customer has submitted his completed warranty registration within 10 days of purchase and when the stipulations of the warranty have been met. Violations of warranty clauses will automatically void the warranty and service or repairs will be charged to the owner.

Service outside the warranty will be charged at the cost of parts, labor, and return shipping. Repaired equipment will be returned via UPS C.O.D. C.O.D. charges can be avoided by including a VISA or MasterCard number with the return, to which repair can be charged when it is returned for service. When service or repairs appear necessary, it may be wise to call or write Kantronics to determine if the problem can be solved without returning the disk. When calling report the product name and ask for the Amateur Radio Service Department. The Service department hours are 9 am - noon and 2 pm - 5 pm central time phone 913-842-4476, Monday through Friday. When writing include a clear description of the problem.

Returns to the factory for refund or exchange are strictly regulated. Any return for refund or exchange must be approved by the Service Department.

Warranty

Kantronics warrants each new terminal program to be free from material, workmanship, and program defects for a period of 90 days. Following this period, for nine months, Kantronics will replace or repair, at our option, your terminal program at cost plus shipping and handling.

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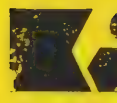
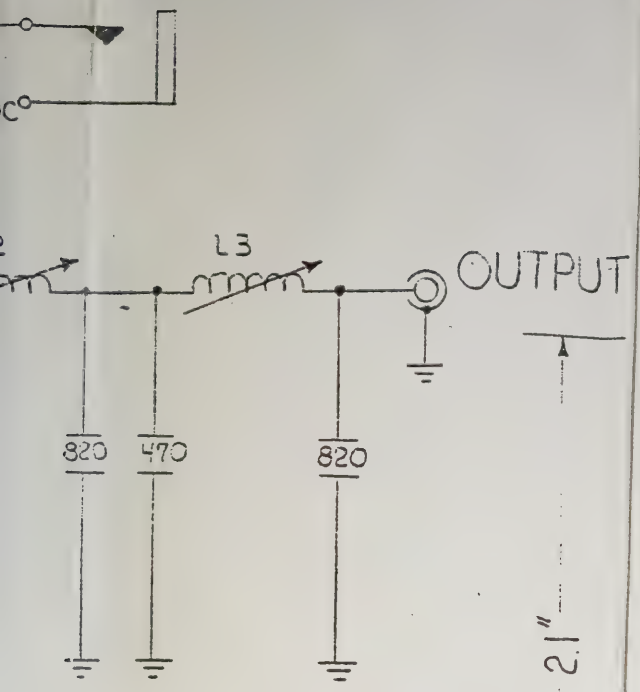


Kantronics

RF Data Communications Specialists

1202 E. 23rd Street, Lawrence, Kansas 66046
Order number (913) 842-7745
Service number (913) 842-4476
9 am - noon, 2 pm - 5 pm Central Time, Monday-Friday

Note: This jack is floating above ground.



DRAWN BY	
CHK'D BY	
ENGR	
SCALE	Layout 2=1 Schem

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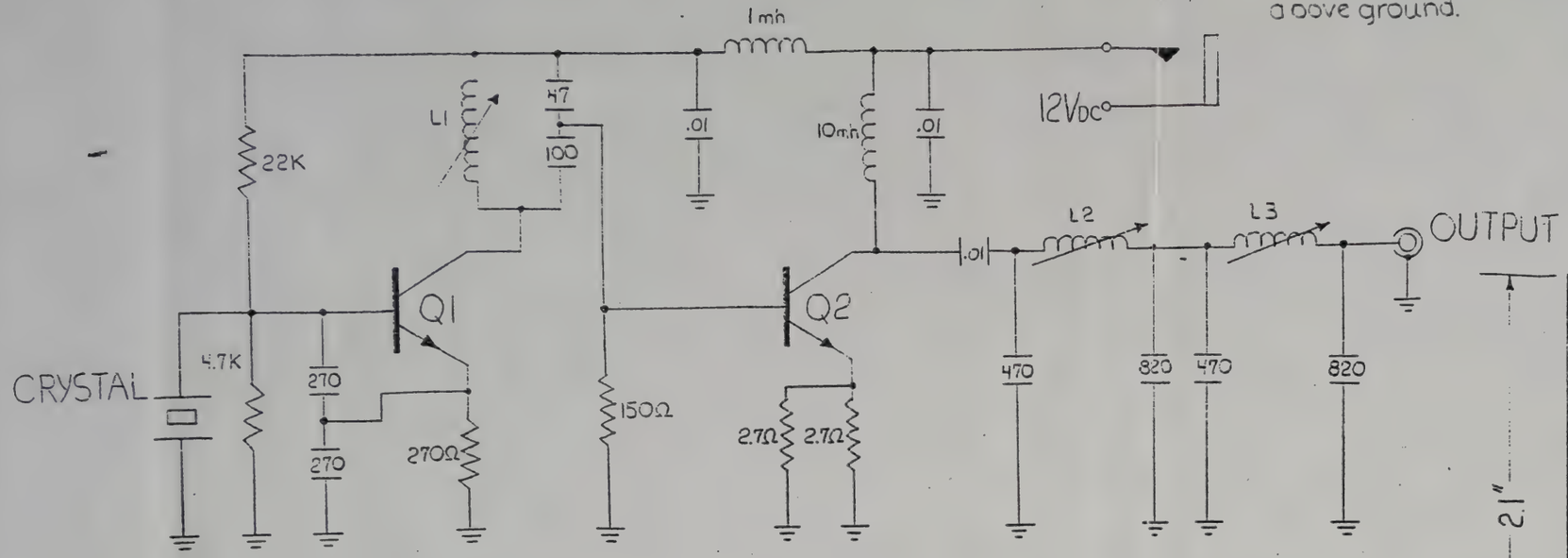

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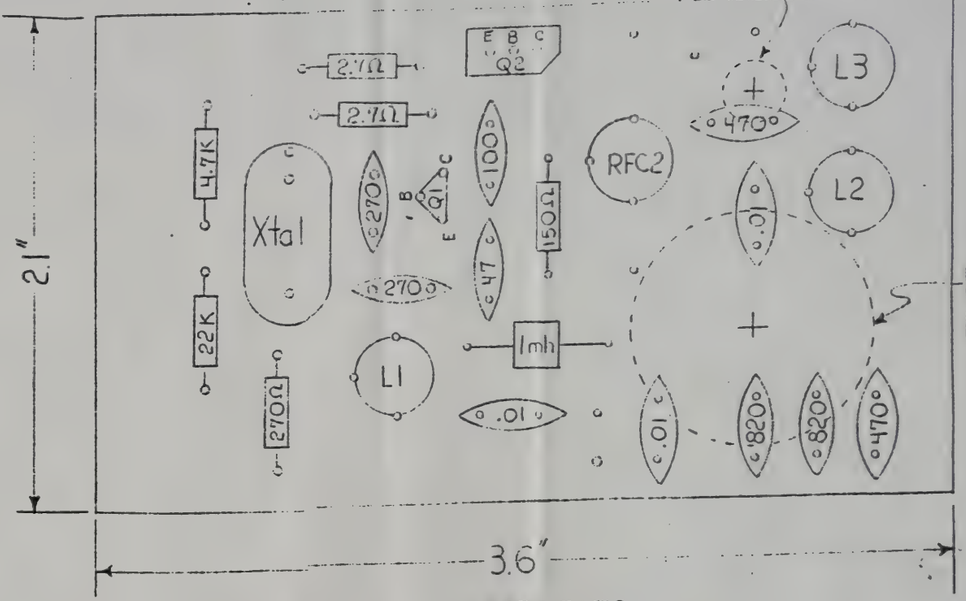
Q2 - D40D1 (2)



L1 = 5.6-10 μh
L2 = .76-1.25 μh
L3 = 1.65-2.75 μh
RFC2 = 5.6-10 μh

Q1 = MPS5172
Q2 = D40D1 (D40D2)

KANTRONICS INC.
Lawrence, Kansas

TITLE: ROCKHOUND
Crystal Transmitter
Layout & Schematic

DRAWN BY

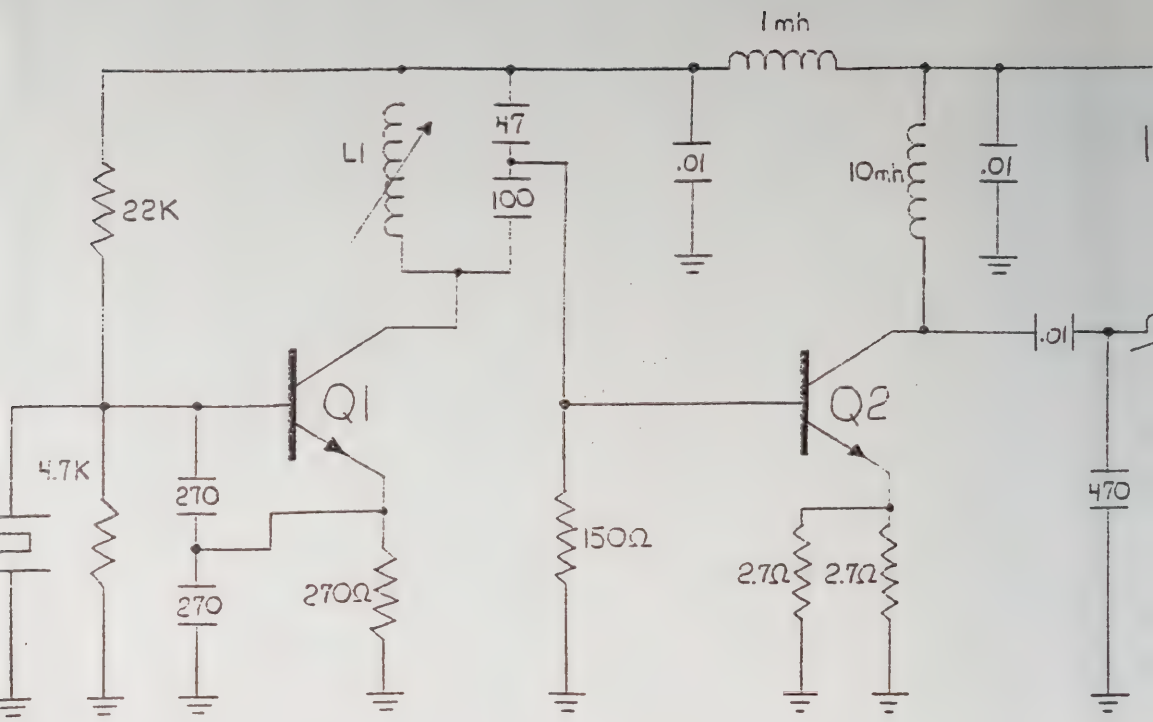
CHK'D BY

ENGR

NUMBER: 293C-1A

SCALE: Layout 2=1 Schem

COMMENTS:
Output: Approx. 1W.
Output: Z 50-100Ω



Q1 = MPS5172

Q2 - D40D1 (2)

KANTRONICS INC.
Lawrence, Kansas

TITLE

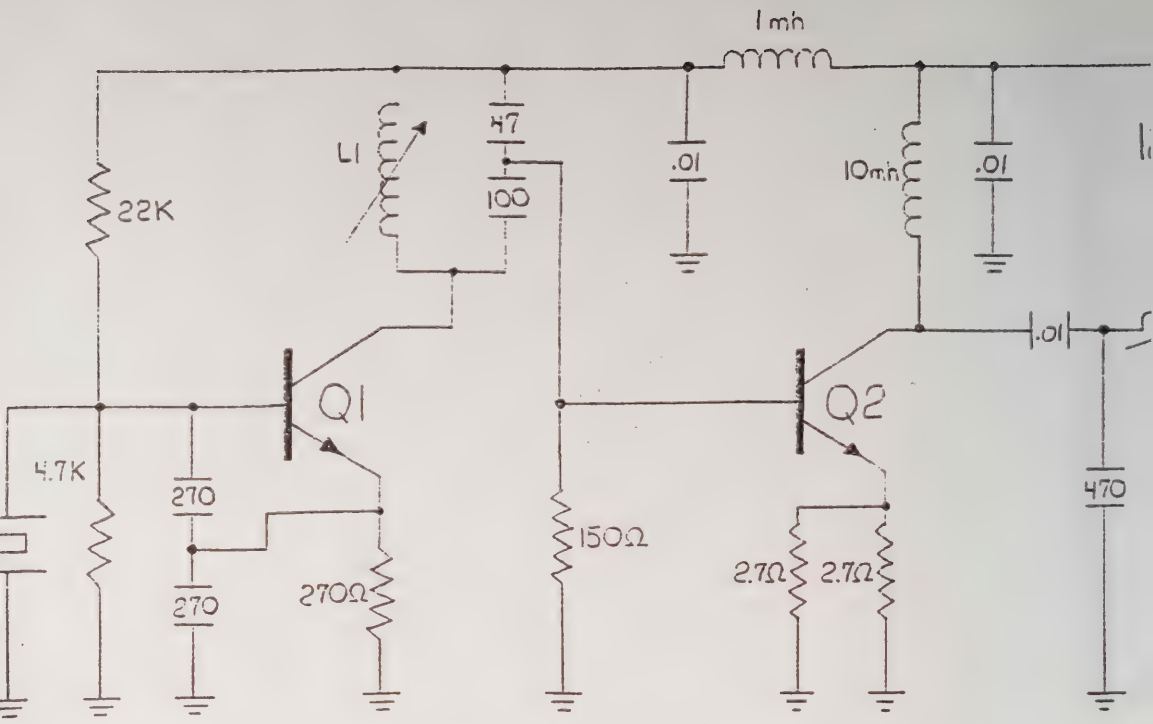
ROCKHOUND
Crystal Transmitte
Layout & Schematic

COMMENTS:

Output: Approx. 1W.
Output: Z 50-100Ω

NUMBER

293C-1A



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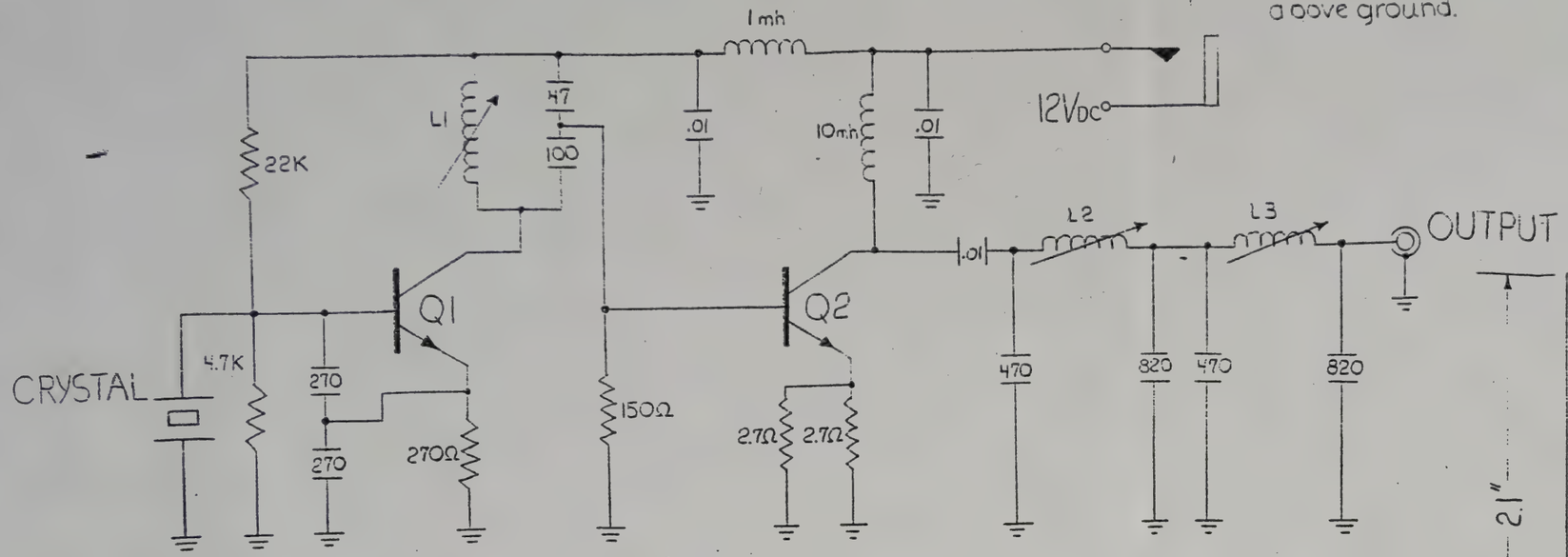

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		CHK'D BY:
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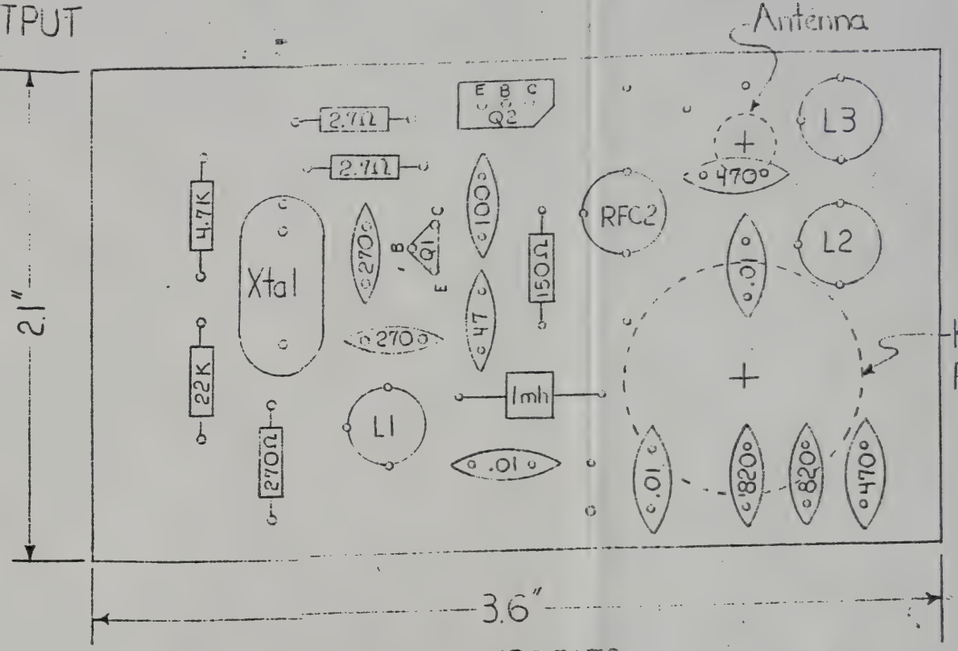

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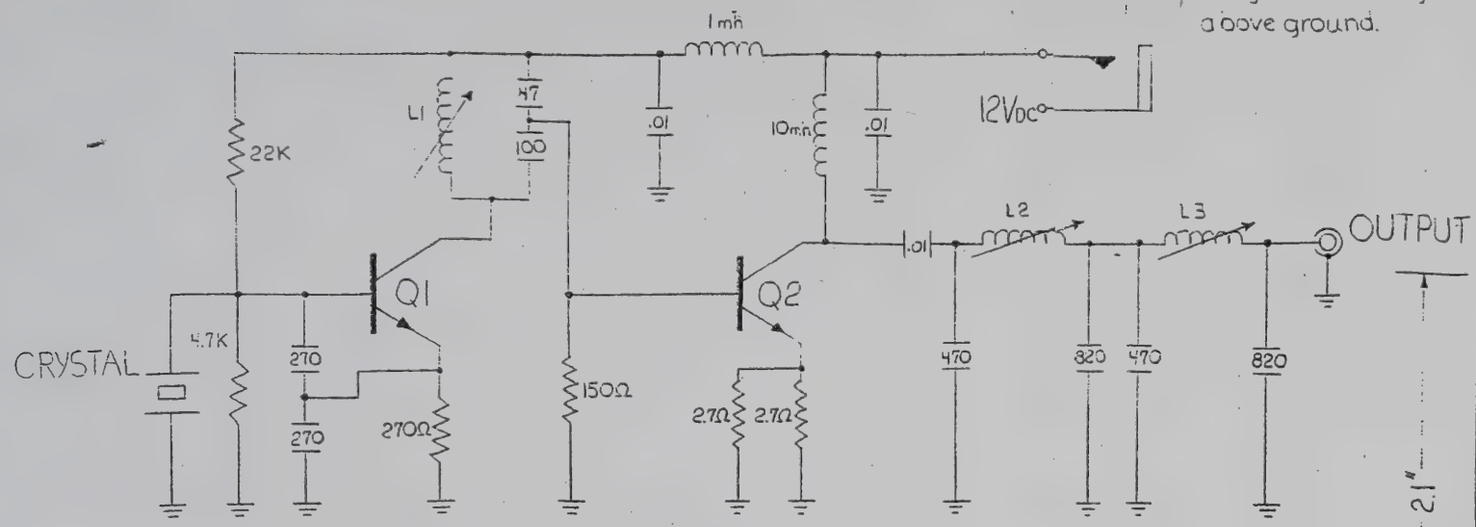

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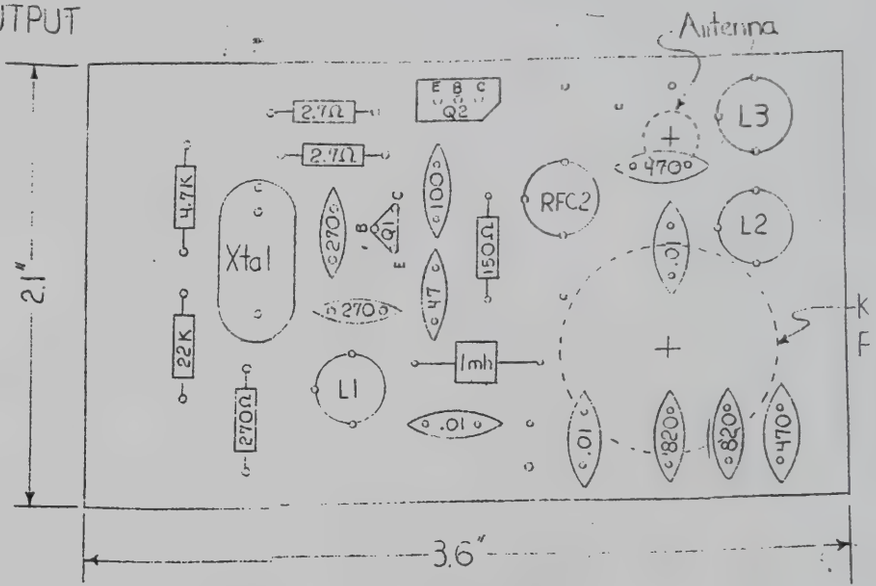

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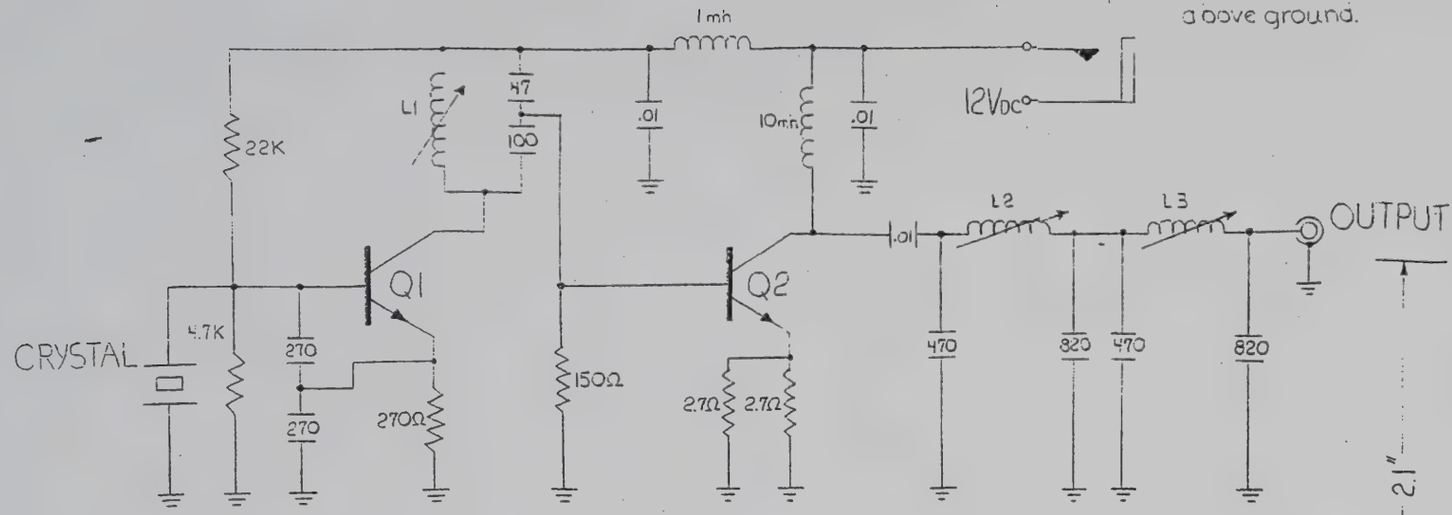

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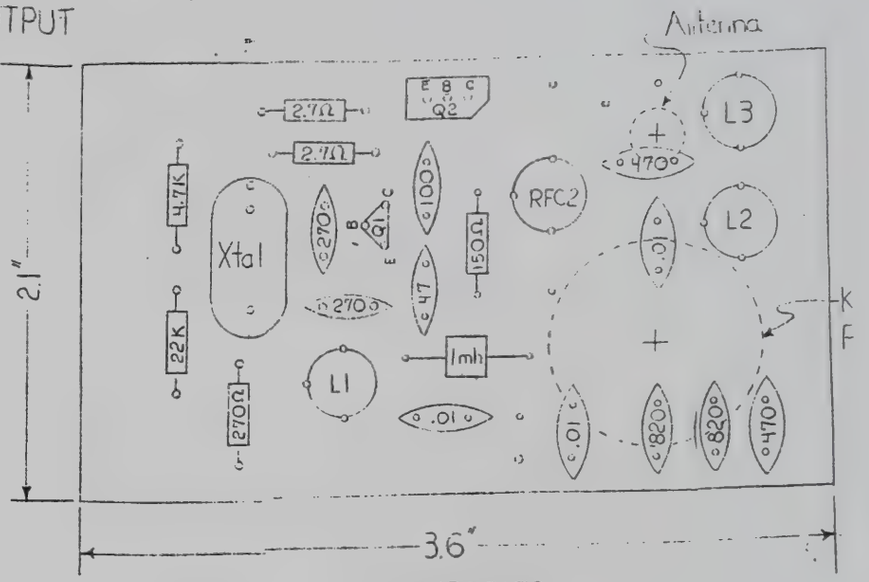

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Rockhound™

crystal QRPp transmitter

Get big results from 2 watts.

QRPp means big results with minimum equipment. It means finding out what you can do with the least instead of the most. It means having fun with the basics of amateur radio the way hams have since the first decade of this century.

The **Rockhound** generates a booming 2-watt signal anywhere on 40 or 80 meters, depending on your model choice. Your favorite crystal and antenna lead-ins plug directly into the front panel. 12 to 15 VDC hooks in-line with your key.

The **Rockhound** will fit in your pocket (providing it's about 3½" by 4" by 1½") and it weighs less than 6 ounces with a crystal! It's ready to go anywhere at any time.

Take the **Rockhound** along on backpacking hikes, camping trips or down to the office for QRPp fun. Our **8040-B** receiver makes a lightweight companion and the **Freedom** VFO will allow variable-frequency operation through the crystal port.

Discover the excitement and simplicity of QRPp fun today with the **Rockhound**. It's a gem!

Kantronics

Specifications

Power requirements:	external 12 to 15 VDC source (lantern batteries suggested), 400 ma @ 13.8 VDC
Frequency coverage:	40 or 80 meter bandwidth, depending on model, specify 80 or 40 meters when ordering
Power output:	2 watts into a 50 ohm load
Dimensions:	approximately HWD 3" x 4" x 1.5"
Weight:	6 ounces
Includes:	RCA plug, phone plug and manual
Options:	7.125 MHz or 3.725 MHz crystals, $3.95 @

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(913) 842-7745
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Lawrence, Kansas 66044

Software

Kantronics

RF Data Communications Specialists

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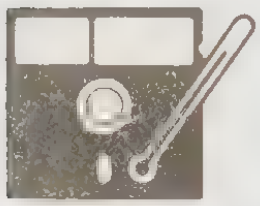
DISKETTE CARE AND HANDLING INFORMATION

Protect　　Proteger
Protéger　　Schützen
保 護

No　　No
Non　　Falsch
注 意

Insert Carefully　　Insertar
Inserer avec soin　　Sorgfältig Einsetzen
挿入,注意

Never　　Nunca
Jamais　　Nie
絶対禁止

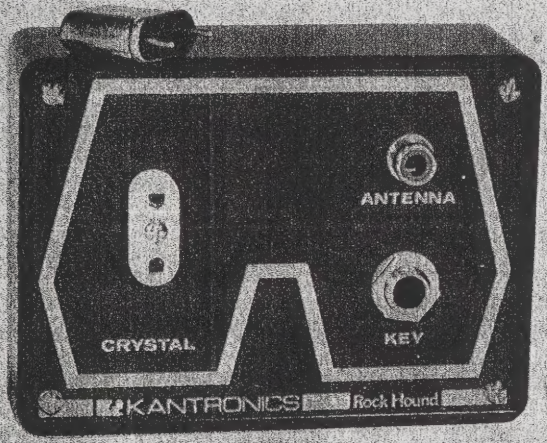


10°C–52°C
50°F–125°F

Never　　Nunca
Jamais　　Nie
絶対禁止

Rockhound T.M.

crystal QRPp transmitter



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